

2SC3910

Silicon NPN Triple-Diffused Junction Mesa Type

High Speed Switching

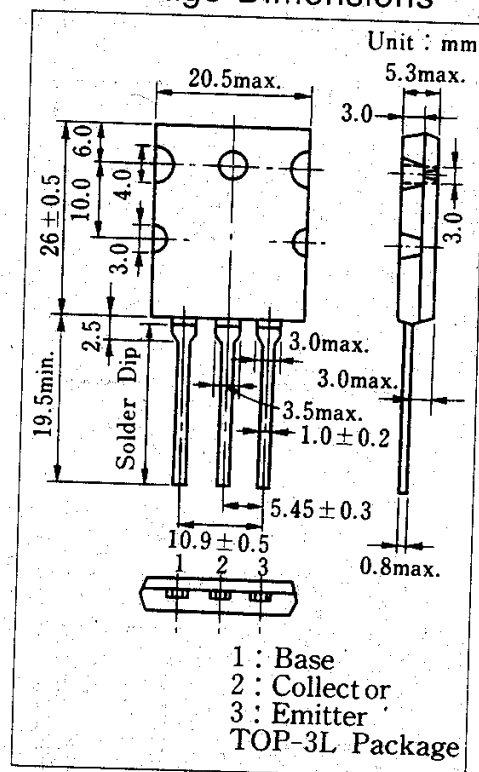
■ Features

- High speed switching
- High collector-base voltage (V_{CB0})
- Wide area of safety operation (ASO)
- Good linearity of h_{FE}

■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	800	V
Collector-emitter voltage	V_{CES}	800	V
	V_{CEO}	500	V
Emitter-base voltage	V_{EBO}	7	V
Peak collector current	I_{CP}	30	A
Collector current	I_C	15	A
Base current	I_B	5	A
Collector power dissipation	$T_c=25^\circ\text{C}$ $T_a=25^\circ\text{C}$	P_C	W
		150 3.5	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

■ Package Dimensions

■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB}=800\text{V}, I_E=0$			100	μA
Emitter cutoff current	I_{EBO}	$V_{EB}=7\text{V}, I_C=0$			0.1	mA
Collector-emitter voltage	$V_{CEO(sus)}$	$I_C=0.5\text{A}, L=25\text{mH}$	500			V
DC current gain	h_{FE1}	$V_{CE}=5\text{V}, I_C=0.1\text{A}$	15			
	h_{FE2}	$V_{CE}=5\text{V}, I_C=8\text{A}$	10			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=8\text{A}, I_B=1.6\text{A}$			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=8\text{A}, I_B=1.6\text{A}$			1.5	V
Turn-on time	t_{on}	$I_C=8\text{A}$			1	μs
Storage time	t_{stg}	$I_{B1}=1.6\text{A}, I_{B2}=-1.6\text{A}$			3	μs
Collector current fall time	t_f	$V_{CC}=200\text{V}$			1	μs
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=0.5\text{A}, f=0.5\text{MHz}$		2		MHz